

### **REMARKS**

By the present Amendment, Applicants have submitted new claims 13-23 for consideration by the Examiner and assert that these claims do not contain any prohibited new matter. These claims find support in Applicants' specification at page 8, line 13 to page 10, line 2, page 17, line 1 to page 19, line 18 and Fig. 7. Further, Applicants have canceled claim 4 without disclaimer. Moreover, Applicants have amended claims 1, 8 and 11 to further clarify the invention. Claims 1-3 and 5-23 remain pending in the present application.

In the Advisory Action dated June 7, 2005, the Examiner indicated that a first root layer of the prediction model of the present invention corresponds to the "first data matrix" of Lundahl and a subsequent layer corresponds to the "second data matrix". However, this is not correct. The "first data matrix" of Lundahl corresponds to the data input to the first root layer prediction model and the "second data matrix" of Lundahl corresponds to the data input to the subsequent layer prediction model. The data matrix is the group of data having plural attributes while the prediction model is a rule defining the relation between the input value(s) and the output value. Further, Lundahl does not show that the "first data matrix" and the "second data matrix" are arranged in hierarchy structure. In contrast, according to the present invention, the prediction models are arranged in hierarchy structure but the data to be input to the prediction models is not in hierarchy structure.

Further, in the Advisory Action, the Examiner mentions that the "output value" of the present invention corresponds to the "optimal value" of Lundahl and that the prediction model selecting means of the present invention is shown in column 44,

lines 9-44 of Lundahl. However, this portion of Lundahl only describes “using non-linear prediction models to selectively predict optimal values” and “generating linear models extending the domain space of possible values of the combinations of the column objects of said second data matrix and the row objects of said third data matrix with new data having the same column data structure of said second data matrix, the same row data structure of said third data matrix, and a response value representing the same measure from the elements of said first data matrix”.

However these portions of Lundahl do not disclose or suggest selecting other non linear prediction model according to the optimal values. Accordingly, these portions of Lundahl do not show “selecting the prediction model in a subsequent layer according to the output value by a selection unit of the computer”, as recited in the claims of the present invention.

Regarding Giles, the Examiner asserts that Giles discloses limitations in the claims of the present invention at col. 4, lines 48-67 and col. 5, lines 1-5. However, Giles mainly relates to the model construction including the input variable determination and the boundary definition. Giles shows a hierarchical clustering (see, column 2, lines 39-63). Hierarchical clustering is one data mining approach for classifying unknown data set into some subsets or clusters. Hierarchical clustering is an agglomerative approach in which single expression profiles are joined to form groups, which are further joined until the process has been carried to completion, forming a single hierarchical tree. The clusters constitute the tree and the tree grows from branch to root and there is no input/output function on or branch of the tree structure in Giles. In contrast, the present invention arranges the prediction models

in tree form and data grows from root to branch. The route is determined according to the function (prediction model) output. Thus, the present invention is different from Giles in tree structure component and tree structure function.

Giles describes the method for finding the optimal boundary for each independent input variables and calculating a score for each independent input variables from column 4, line 48 to column 5, line 5 of Giles. The score indicates the accuracy of the prediction model but not the prediction value (output of the prediction model). In contrast, in the present invention, the score indicates the output of the prediction model.

To the extent necessary, Applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to the deposit account of Mattingly, Stanger & Malur, P.C., Deposit Account No. 50-1417 (referencing attorney docket no. 500.39461X00).

Respectfully submitted,

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